Discussion of
"Impact Investing and Venture Capital Industry: Experimental Evidence"

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Summary and Main Contributions

- This paper studies venture capitalists' ESG preferences.
  - use incentivized resume ratinmg experiment (IRR) and "outcome test" to identify the underlysing source of ESG preference: taste-based vs belief-based
  - a dynamic Bayesian model to assess how ESG preferences affect the evolution of impact investment

- Very important question!
  - many answers in impact investing depends critically on the underlysing source of ESG preference.
    - how impact investing evolves dynamically?
    - optimal policy to improve impact investment?
  - combine two methods in the discrimination literature.
    static experiments are usually difficult to identify underlying source of preference (Bohren et al. (2019))

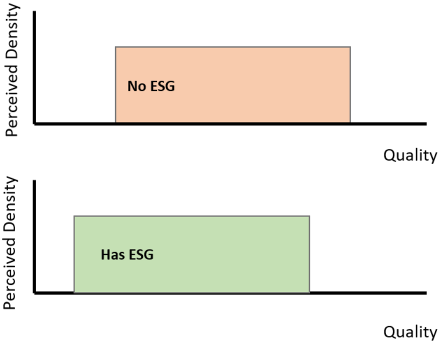
My discussion

- Comment 1: IRR and Taste-based ESG preference
- Comment 2: Outcome Test and Belief-based ESG preference
- Comment 3: Who are impact investors?
- Minor comments

Comment 1: IRR and Taste-based ESG preference

- IRR experiments
  - compare to survey, create stronger incentive to reveal true preferences
  - compare to standard VC databases, control for the unobservable private information
- Suggestive evidence of taste-based preference toward ESG
  - impact ventures are perceived to have lower quality, but receive similar attractiveness rating and more attention
- The author is very careful in interpreting these results.
  - "When the sample size is large enough, researchers can generate some indirect evidence of taste-driven preferences... However, the sample size of this IRR experiment does not provide enough power to test taste-driven preferences."
- Potential issue when using insigificant results to identify the taste-based preference.

Comment 1: IRR and Taste-based ESG preference



- Has ESG means lower perceived quality

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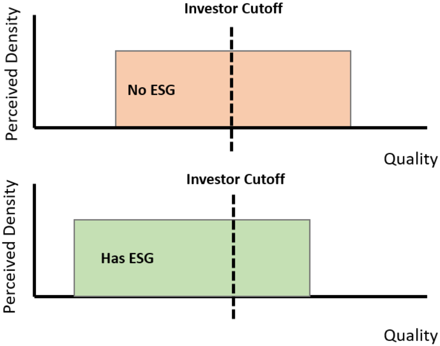

- Has ESG means lower perceived quality
- Assume no taste-based preference, same investment cutoff for "No ESG startups" and "Has ESG startups"

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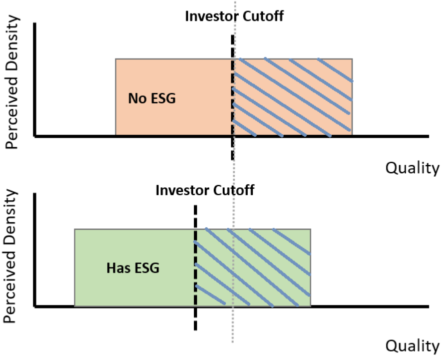
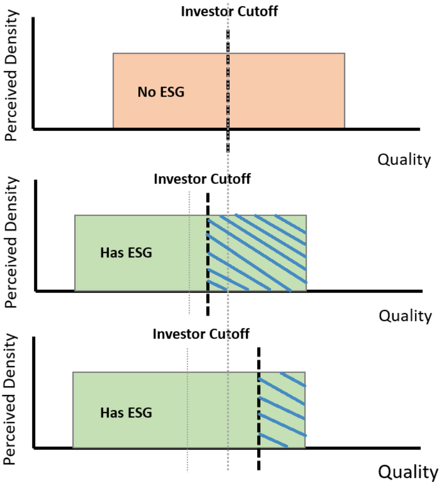


Table 6, Panel B:

	Attractiveness (i.e., Q_3)			
	45th [5]	55th [6]	65th [7]	75th [8]
Has ESG	-7.00 (8.83)	6.00 (6.14)	-9.00 (6.46)	-3.00 (4.40)

- Evidence 1: same attractiveness for "Has ESG startups" (insignificant)
- $Q_3 = \beta HasESG + \varepsilon$
- β: the difference in the relative sizes of the right hand area
- insiginificant β, same size

Comment 1: IRR and Taste-based ESG preference



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- be cautious when interepting insignficant evidence, especially important due to the low power of the IRR experiment
- negative β could mean taste-based against ESG preference

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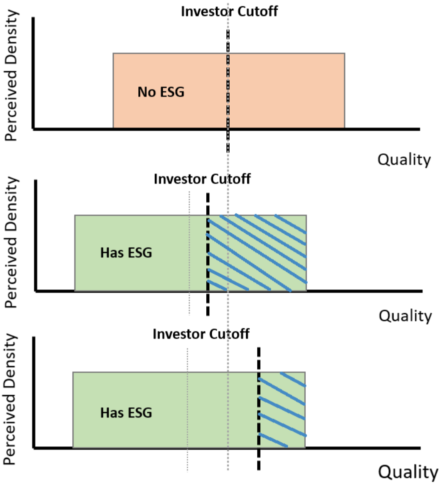

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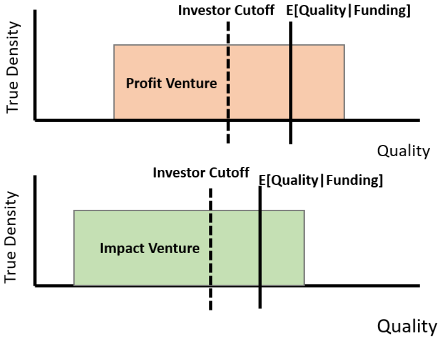
- be cautious when interepting insignficant evidence, especially important due to the low power of the IRR experiment
- negative β could mean taste-based against ESG preference
- especially when we use Tables 5 and 6 to analyze the ESG preference of impact investors
- Potential Solution: additional results using the "investor attention" test

Comment 2: Outcome Test and Belief-based ESG preference

- Static outcome test cannot distinguish belief-based preference and taste-based preference (Bohren et al. (2019), Ewens and Townsend (2020))
- One nice innovation of this paper is combining the results from the IRR and the outcome test
  - IRR results - ESG startup are perceived to have lower quality - derived from experiment participants
  - Outcome test - conditional on being funded, impact ventures have better performance - using Pitchbook data
- Omitted variable concern is addresses by the IRR experiment. But Pitchbook sample may suffer from it.
- Beliefs about "Has ESG startups" from IRR == Beliefs about "Impact Investor" from Pitchbook?

Comment 2: Outcome Test and Belief-based ESG preference



- Assume no belief-based ESG preference, the perceived density is the true density for both profit venture and impact venture

- Then the conditional being funded, the average quality of impact venture is lower

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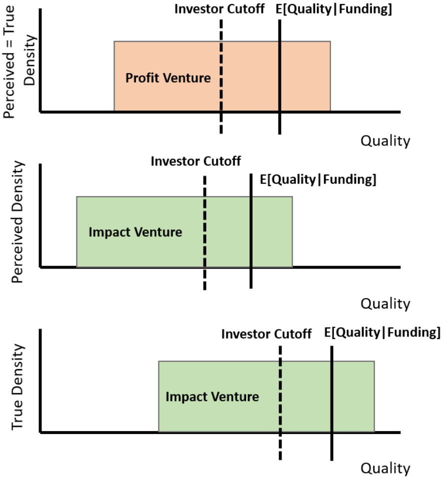

- Assume no belief-based ESG preference, the perceived density is the true density for both profit venture and impact venture
- Then the conditional being funded, the average quality of impact venture is lower
- "Outcome test" using Pitchbook shows higher conditional quality for impact venture , so the true quality of impact venture must be higher

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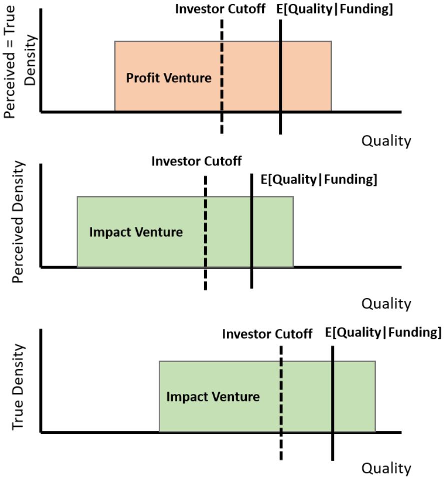

- However, this result is conditional on that impact venture in pitchbook has lower perceived performance, as the the "Has ESG startups" from IRR

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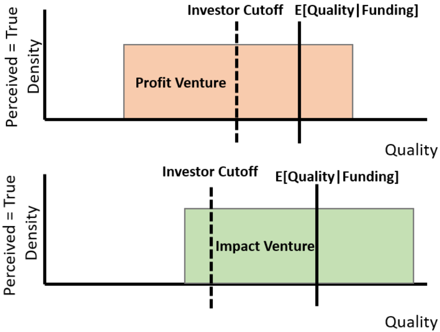

- However, this result is conditional on that impact venture in pitchbook has lower perceived performance, as the the "Has ESG startups" from IRR
- Unlike IRR results, not immuned to the omitted variable concern
- If for pitchbook ventures, perceived performance of impact venture is higher, then we will have the same results, but no belief-based ESG preference

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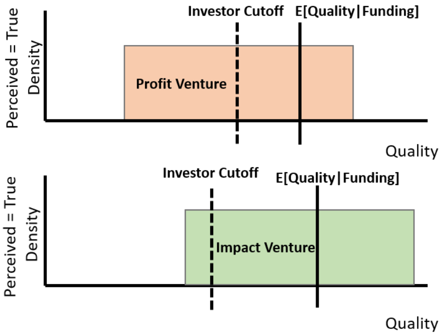

- Potential solution: use IRR"matched" dataset, as in Table 14, to conduct outcome tests
- Low sample size? Ok if we relax the matching threshold.

Comment 3: Who are impact investors?

- The paper uncovers the underlying source of ESG preferences.
- Go back to the begining – who are impact investors?
  - Barber et al. (2021): "dual objectives of generating a positive externality in addition to earning financial returns."
  - Investors with taste-based ESG preference ?
- How about investors with belief-based ESG preference?
  - investors that overestimate the performance of impact ventures.
  - seems good if we want to promote ESG?
- Simulate using the dynamic Bayesian model
  - how the existence of belief-based impact investor affects the evolvemetn of impact investing.

Minor Comment

- The model incorporate taste-based preference in the Bohren et al. (2019) model to study the dynamics of impact investment.

- Investor

$$\arg\max_{v} E(-(v-(q-c_g^i))^2)|h,s,g)$$

  - minimize the difference between their evaluated quality (v) and taste-adjusted true quality

- The objective function makes sentence in the context of promoting employee and evaluating the quality of online comments.

- More discussion on why investor wants to minimize the rating differences in the impact investing context.

Conclusion

- Fascinating Paper!
- Important question, rich results, and very careful interpretation.
- Document the "non-pecuniary" motivations of impact investing and miscalibrated belief against impact investing.
- Hope my comments will help with the next version of the paper.
- Thank you!

Appendix

References

Barber, B. M., Morse, A., Yasuda, A., 2021. Impact investing. Journal of Financial Economics 139, 162–185.

Bohren, J. A., Imas, A., Rosenberg, M., 2019. The dynamics of discrimination: Theory and evidence. American economic review 109, 3395–3436.

Ewens, M., Townsend, R. R., 2020. Are early stage investors biased against women? Journal of Financial Economics 135, 653–677.